

REMARKS

Applicants have cancelled claims 27-29 and 43-47 without prejudice.

Claims 22-26 and 40-42, of which claim 22 is independent in form, are presented for examination. The claims recite a stent comprising a stent body defining a first hole, a washer adjacent to the stent body, the washer defining a second hole, and a rivet extending into the first and second holes. As explained in the application, the washer can aid in securing the rivet to the stent by "provid[ing] a larger base for securing the rivet to the stent." (See Application, page 4.)

The Examiner has rejected claims 27-29 and 43-47 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,334,871 (Dor). Applicants have cancelled claims 27-29 and 43-47, thereby rendering this rejection moot.

The Examiner has rejected claims 22-26 and 40-42 under 35 U.S.C. § 103(a) as unpatentable over Dor in view of U.S. Patent No. 3,869,956 (Breer). In particular, the Examiner has conceded that "Dor does not disclose a washer in combination with a rivet" (November 17, 2004 Office Action, page 3), but has asserted that a person of ordinary skill in the art would have been motivated to combine Dor with Breer, which discloses a prior art rivet and washer system. (See Breer, col. 2, lines 51-62.) But a person of ordinary skill in the art would not have been motivated to modify Dor, let alone to modify Dor by combining Dor with Breer.

Dor discloses a stent, within which are inserted radiopaque rivets. (See, e.g., Dor, col. 2, lines 15-20.) Dor explains that the rivets in his stents are preferably compressed into the stent material. (See id., col. 4, lines 3-4.) If further securing of the rivets is desired, then the rivets can be heated:

Optionally, in addition to or in place of compression, the surface between the rivets and the stent can be heated to weld or fuse the rivets into position. Preferably such heating would be focused heating, for example, with a laser, where only the rivet and stent material would be present. (Id., col. 4, lines 4-9.)

Dor provides an example of how such heat treatment would work for a gold marker in a stainless steel stent. If there is a suitable amount of heating, then some of the gold from the marker will

tend to migrate into the stainless steel stent, and some of the stainless steel from the stent will migrate into the marker. (See id., col. 4, lines 16-26.) Dor explains that this heat treatment of the gold marker secures the marker to the stent material, in addition to providing other advantages:

The process described above is particularly advantageous for at least two reasons. First, more gold can be put into each marker, which results in a better x-ray or fluoroscopic image. And second, the migration of gold into the [stent] results in a more secure fit of the marker [] in the [stent], as compared to compression or welded marker situations. (Id., col. 4, lines 57-63.)

Dor also provides experimental data showing that heat treatment results in a much more secure fit for gold markers in stainless steel stents than does either compression or compression and welding. (See id., col. 4, line 63 — col. 5, line 10.) Another advantage of heat treating a rivet to secure the rivet to a stent is that heat treatment generally would not increase the profile of the stent. Thus, upon reading Dor, a person of ordinary skill in the art would have been motivated to use heat treatment to secure a rivet to a stent, rather than a washer.

In response to Applicants' previous arguments, the Examiner has asserted that a "rivet and washer combination is [a] conventional and well-known fastener combination", and that references such as Breer and U.S. Patent No. 3,641,296 (Schwarz) "are referred to only as an example of the wide use of a combination of a rivet and a washer." (November 17, 2004 Office Action, page 3.) Applicants do not dispute that the combination of a rivet and a washer is conventional. Rather, the issue is whether it would have been obvious to use such a combination in a stent. Here, not only does Dor fail to indicate that his method of securing a rivet to a stent is somehow lacking, Dor touts his method as one that provides a very well-secured rivet. As a result, a person of ordinary skill in the art would not have been motivated to modify Dor's method. And even assuming without conceding that there would have been motivation to modify Dor's method, a person of ordinary skill in the art would not have been motivated to modify it by including a washer. Rather, a person of ordinary skill in the art working with stents would have recognized that stents are used in narrow vessels, and that it is desirable for a stent to

function with a reduced wall profile because a reduced wall profile allows more bodily fluid to flow through the stent. Adding a washer to an otherwise well-secured rivet, as suggested by the Examiner, would be nonsensical, because the rivet would increase the wall profile of the stent. Thus, a person of ordinary skill in the art would not have been motivated to modify Dor's stents by securing their rivets with any washers, including the washers disclosed in either Breer or Schwarz.

For at least the reasons provided above, Applicants believe that the rejection of claims 22-26 and 40-42 should be withdrawn, and that claims 22-26 and 40-42 are in condition for allowance, which action is requested.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: JANUARY 14, 2005

Tu N. Nguyen
Tu N. Nguyen
Reg. No. 42,934

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906